

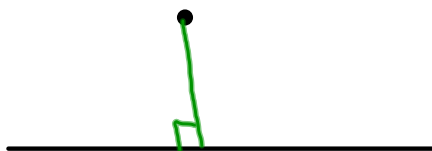
Reminder: Test Monday Chapter 3

Nov 9-11:12 AM

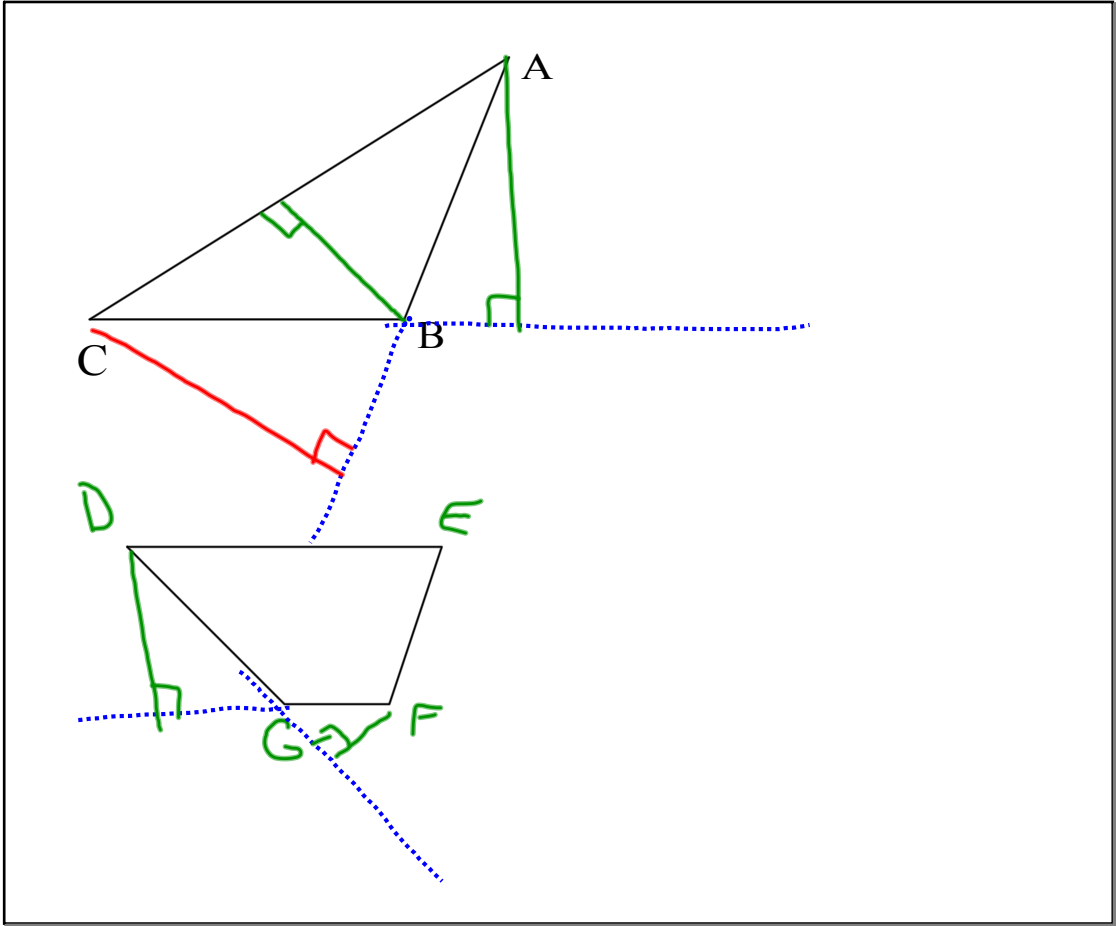
3-6 Perpendiculars and Distance

Distance between a point and a line
perpendicular segment to the line.

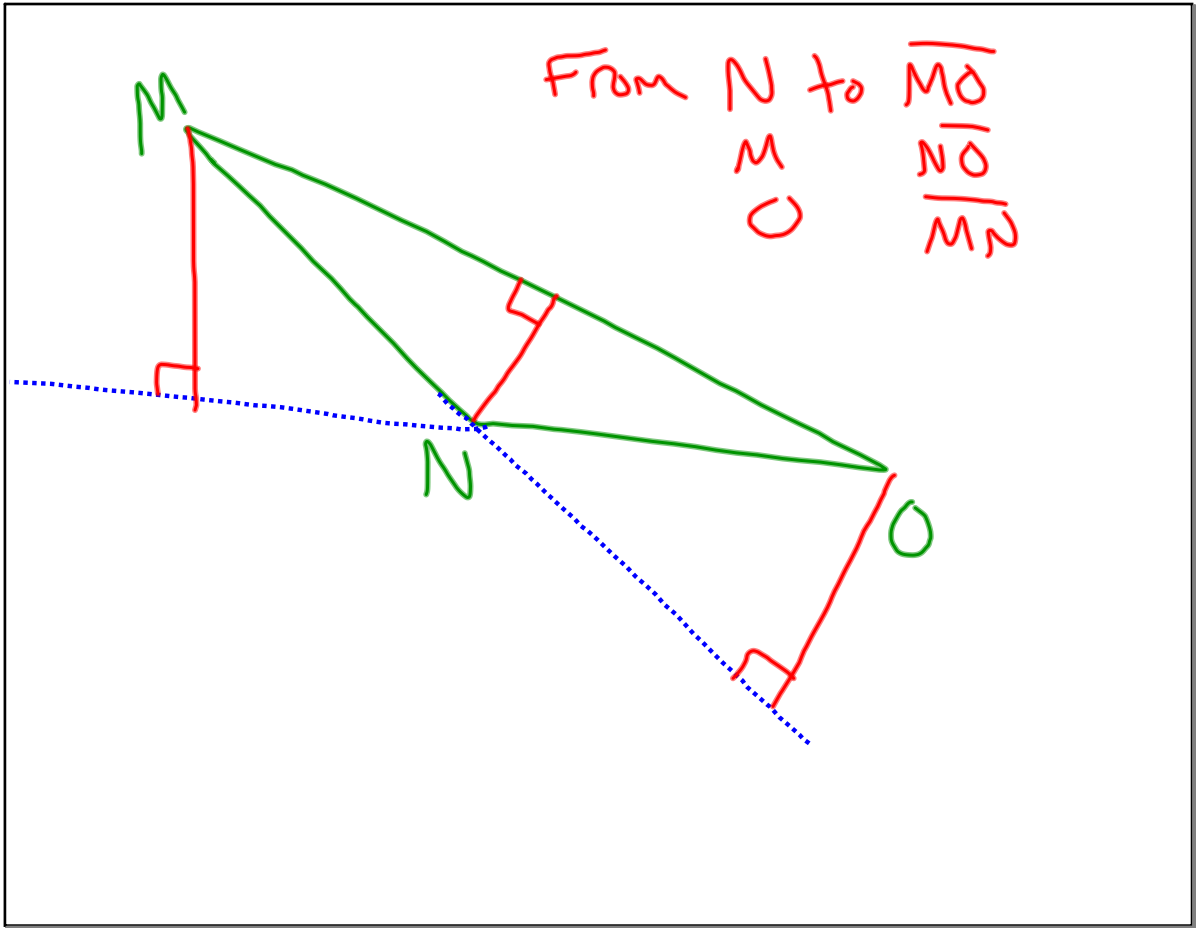
--is the length of a



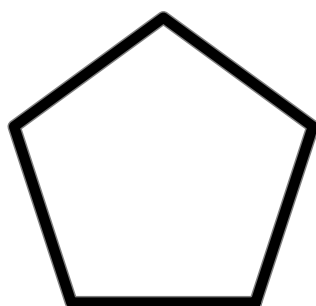
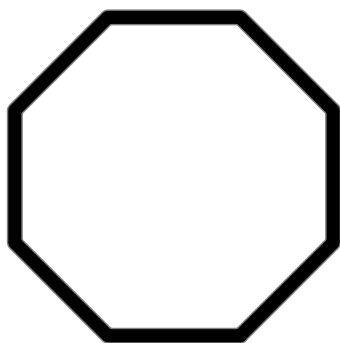
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Nov 9-11:14 AM



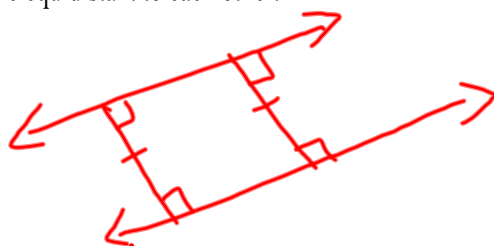
Nov 19-7:57 AM



Nov 9-11:16 AM

Distance between parallel lines
they are equidistant to each other.

--Two lines are \parallel if



Theorem 3.9 --In a plane, if 2 lines are each equidistant from a 3rd line, then the 2 lines are parallel to each other.



Nov 9-11:16 AM

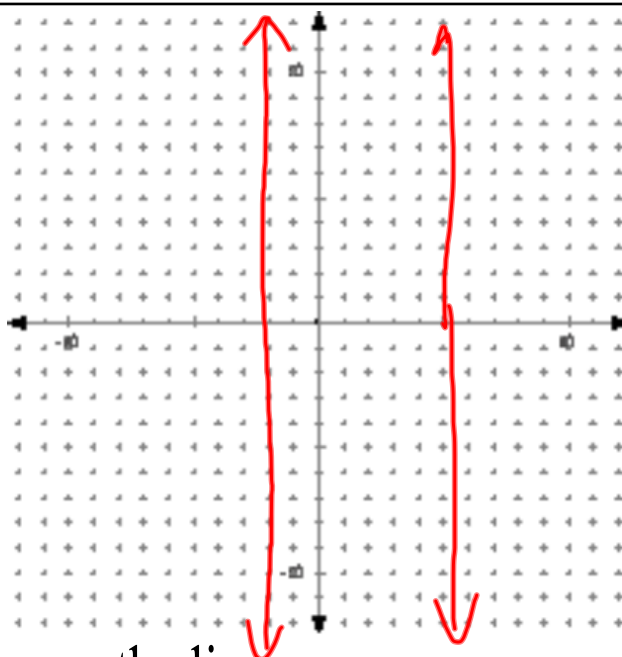
Examples

$$x = 5$$

$$x = -2$$

Find distance between the lines.

$$d = 7 \quad |5 - (-2)| = 7$$



Nov 9-11:19 AM

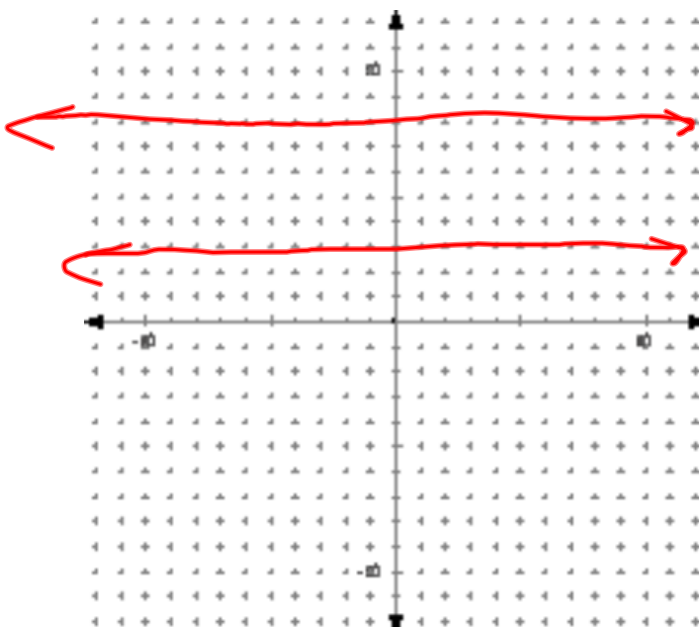
Examples

$$y = 3$$

$$y = 8$$

Find distance.

$$d = 5$$



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If both lines are not horizontal or vertical, it gets complicated.

$$y = 2x + 3$$

$$y = 2x - 3$$

Find Distance.

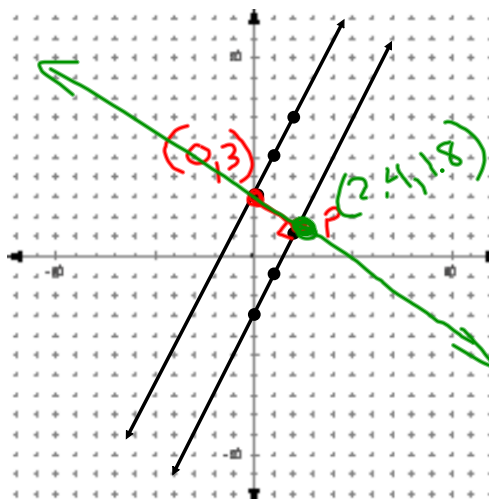
$$y = -\frac{1}{2}x + 3$$

$$2x - 3 = -\frac{1}{2}x + 3$$

$$2\frac{1}{2}x = 6$$

$$x = 2.4$$

$$y = 1.8$$



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$$D = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$(0, 3)(2.4, 1.8)$$

$$= 2.68$$

Nov 19-8:16 AM

HW
p162-163
11-15, 17-20, 32a, b

Nov 9-11:24 AM